What is claimed is:

1. A method of removing at least one population of target pathogens from a biological fluid sample, comprising:

(a) providing a plurality of high density microparticles having bound thereto a reactant which specifically binds to the target pathogen, and having a density sufficient to provide differential gravity settling of the target pathogen from the sample;

(b) mixing a portion of the sample with the microparticles to bind the microparticles to the target pathogen;

(c) settling the microparticles with the bound pathogen in the sample to produce a supernatant substantially free from the bound pathogen, where the settling is accomplished primarily by gravity; and

(d) separating the microparticles bound to the pathogen from the supernatant.

2. The method of Claim 1 wherein said mixing is effected by passing the microparticles at least once through the sample.

3. The method of Claim 2 wherein said mixing and settling steps are conducted simultaneously such that mixing is effected solely by differential gravity settling.

4. The method of Claim 2 wherein said mixing is effected by causing the microparticles to repeatedly settle through a substantial portion of the sample.

5. The method of Claim 4 wherein said mixing is effected by vortexing or nutation.

6. The method of Claim 4 wherein said mixing is effected by tumbling the sample and the microparticles end-over-end.

7. The method of Claim 1 which further comprises spinning the microparticles and sample to accelerate the settling step.

8. The method of Claim 1, wherein said microparticles are magnetic and said method further comprises applying a magnet or magnetic field to the sample and microparticles after the settling step.

9. The method of Claim 1 wherein more than one population of pathogens are

removed sequentially or all at one time.

10. The method of Claim 1 wherein the reactant is an antibody.
11. The method of Claim 1 wherein the reactant is bound covalently to the microparticles.
12. The method of Claim 1 wherein the reactant is bound to the microparticles by streptavidin-biotin coupling.
13. The method of Claim 1 wherein said microparticles are formed of nickel.
14. The method of Claim 1 wherein said microparticles have a diameter of 1 to 50 microns.
15. The method of Claim 1 wherein said microparticles have a diameter of 3 to 35 microns.
16. The method of Claim 1 wherein said biological fluid sample comprises non-target materials and the microparticles are 2 to 3 times more dense than said non-target materials.
17. The method of Claim 15 wherein said microparticles have a density greater than 2 g/cm^3.
18. The method of Claim 16 wherein said microparticles have a density of 9 gm/cm^3.
19. The method of Claim 1 wherein the biological fluid sample is dispersed tissue, bone marrow aspirates or vertebral body bone marrow.
20. The method of Claim 18 wherein the supematant is used for clinical transplantation.
21. The method of Claim 1 wherein the volume of the fluid sample ranges from 100 milliliters to 3 liters.
22. The method of Claim 1 wherein the target pathogen is a prion.
23. The method of Claim 1 wherein the target pathogen is a virus.
24. The method of Claim 1 wherein the target pathogen is a bacterium.
25. The method of Claim 24 wherein the bacterium is Bacillus anthracis.
26. The method of Claim 24 whrein the bacterium is Yersinia pestis.
27. The method of Claim 24 wherein the bacterium is Francisella tularensis.
28. The method of Claim 1 wherein said microparticles are coated with a poly (glutamic acid, lysine, tyrosine) tri-amino acid polymer, wherein said glutamic

acid, said lysine, and said tyrosine are present in said tri-amino acid polymer at a ratio of glutamic acid to lysine to tyrosine of 6:3:1.

29. A product, comprising:

(a) a high density microparticle; and

(b) a coating, said coating being a poly (glutamic acid, lysine, tyrosine) tri-amino acid polymer, wherein said glutamic acid, said lysine, and said tyrosine are present in said tri-amino acid polymer at a ratio of glutamic acid to lysine to tyrosine of 6:3:1.

30. The product of claim 29 wherein said high density microparticle is formed of nickel.

31. The product of Claim 30 wherein said high density microparticle has a diameter of 1 to 50 microns.

32. The product of claim 31 wherein said high density microparticle has a diameter of 3 to 35 microns.